

## PATENT ABSTRACTS OF JAPAN

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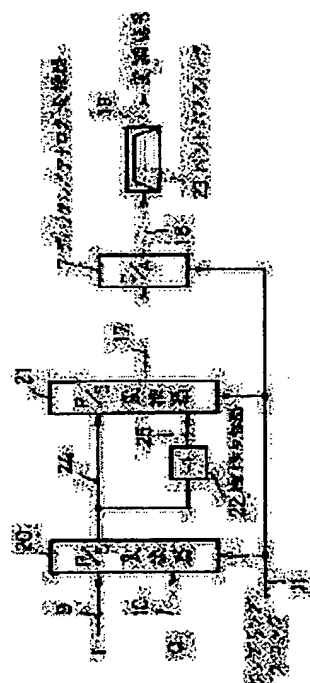
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## (54) DIGITAL QUADRATURE MODULATION DEVICE

(57)Abstract:

PURPOSE: To attain high processing speed by selecting the frequency of the fundamental wave to be a frequency lower than the processing speed of a D/A converter and using harmonic components for a modulation signal.

CONSTITUTION: Base band I, Q signals are synthesized in the order of time by a 1st parallel / serial converter 20 to obtain a signal of one system. The signal produced by the 1st parallel/serial converter 20 is divided into two system signals and the polarity of the one system signal is inverted by a polarity inverter 22. The signal generated by the 1st parallel/serial converter 20 and the signal generated by the polarity inverter 22 are synthesized by a 2nd parallel/serial converter 21 in the order of time to obtain a digital modulation signal. An analog modulation wave is obtained by converting the digital modulation signal at a D/A converter 7. A band pass filter 23 extracts the harmonic component from the analog modulation signal as a modulation signal and eliminates an undesired frequency component to obtain the analog modulation signal from the output of the band pass filter 23.



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